CSCAPE 2005: NOAA Ship McArthur II
Weekly Science Report – Leg 1b
14 July, 2005
Karin A. Forney – Cruise Leader

SCIENCE SUMMARY: 07 July – 13 July 2005

We had a week full of ups and downs, as we worked our way southward towards the central California Sanctuaries. We began the week with a nice day about 40-50 miles off Oregon, and encountered some beaked whales (*Mesoplodon* sp. and unidentified beaked whales), a group of fin whales, and some killer whales which we photographed as our daylight faded. The next day was not a good one, because Rich Pagen, one of our seabird observers, fell ill and we had to drop him off in Coos Bay, Oregon for medical treatment. We are now happy to hear that he has recovered during the past week, and we hope to pick him up again this weekend in the Monterey Bay area so he can finish the cruise with us. During his absence, Kim Pratt and Sage Tezak assisted with seabird data entry on the flying bridge.

The remaining transit southward was also a bit of a mixed bag. We enjoyed one absolutely beautiful, sunny day with light winds ~70 miles off the coast of Humboldt County. Several of us wondered whether we had taken a wrong turn, because this area usually experiences lots of wind and often fog, too. Instead, we were on the flying bridge in T-shirts, enjoying a wonderful day. We encountered a nice aggregation of blue and fin whales, with a few single sperm whales mixed in, and conducted photo ID and biopsy efforts for part of the day. Following this great day, our troubles with the fog began – Sunday brought light winds but only ½ mile visibility most of the day. In the evening, we did manage to survey a short segment and promptly encountered a large group of sperm whales. Strangely enough, as soon as I said the words '90-minute school size estimation,' everyone was convinced they were really Dall's porpoise…. [For sperm whales, we try to stay with the animals for 90 minutes to get better group size estimates. Sperm whales can dive for up to an hour, and our usual 10-15 minutes spent with each group can result in undercounting. But waiting long periods of time for sperm whales to surface again can be quite boring, so this is not one of our most popular activities out here.]. Fortunately, the sperm whales had relatively short dive intervals and were visible much of the time. By the end of the day, we completed the 90-minute estimate, and the small boat returned to the *McArthur II* with 11 biopsy samples and 14 sperm whale ID photos.

Since that day, the fog has continued to torment us. Following two days of windy and foggy weather as we approached the northern boundaries of the Sanctuaries, we move south off the coast of Big Sur, where winds were lighter. Survey effort has been limited to short sections of transect in the afternoons after the fog has lifted ever so slightly, allowing a mile or two of visibility. Not ideal conditions, but we have encountered quite a few humpback whales, and we've spent some time getting additional fluke photographs. These photographs will contribute towards the larger collaborative effort to assess North Pacific humpbacks – the SPLASH project. We've also seen quite a few dolphin groups, often associated with the humpbacks, including Pacific white-sided, northern right whale, and Risso's dolphins, as well as Dall's porpoise and some sea lions. See below for the latest bird buzz. Please send us some good vibes for clear skies and light winds – we're eager to complete the survey along this interesting and productive stretch of coastline! Greetings to all until next week… -K

Sightings and Effort Summary for Marine Mammals

Date	Start/Stop Time	Position	Total Distance	Avg. Beaufort
070705	0539	N45:53.10 W125:55.94	126.1 nmi	3.3
	2059	N43:57.63 W126:06.80		
070805	0943	N43:26.30 W124:28.42	5.6 nmi	5.7
	1019	N43:29.32 W124:34.99		
070905	0605	N41:42.05 W125:49.20	97.2 nmi	2.1
	2010	N40:07.17 W126:22.92		
071005	1604	N38:59.70 W124:41.68	9.7 nmi	1.6
	1701	N38:56.74 W124:29.87		
071205	0624	N36:08.67 W122:20.84	24.2 nmi	5.3
	1951	N36:29.55 W122:26.30		
071305	0611	N36:22.31 W122:38.70	46.0 nmi	3.4
	1905	N36:26.16 W122:08.97		

CODE	SPECIES	WEEKLY TOTAL#	CSCAPE TOTAL#
017	Short-beaked common dolphin	-	1
021	Risso's dolphin	2	2
022	Pacific white-sided dolphin	12	58
027	Northern right whale dolphin	4	17
037	Killer whale	2	6
040	Harbor porpoise	-	25
044	Dall's porpoise	13	69
046	Sperm whale	3	4
049	Ziphiid whale	1	1
051	Mesoplodon sp.	2	2
069	Gray whale	-	2
070	Balaenoptera sp.	2	2
071	Minke whale1	1	
074	Fin whale	7	7
075	Blue whale	8	8
076	Humpback whale	15	130
077	unid. dolphin	-	22
079	unid. large whale	1	17
096	unid. cetacean	1	1
	TOTAL	**74**	**375**

Note: Pinnipeds not included; mixed groups are counted once for each species.

Biopsies (Juan Carlos Salinas, Tim O'Toole, Ernesto Vazquez)

Cumulative

Species	Weekly	(Leg 1b only)
Humpback whale	-	12
Blue whale	4	4
Fin whale	1	1
Sperm whale	11	11
Pacific white-sided dolphin	1	11
Northern right whale dolphin	1	3
Dall's porpoise	1	1
GRAND TOTAL	**19**	**43**

Photo-Project (Cornelia Oedekoven and Holly Fearnbach)

We have had quite a diverse week for photo-id effort. The week began with sunshine, calm winds and several close photo approaches of both fin and blue whales. The small boat was launched on the blues for additional photo-ids and samples. The day was topped off with a late evening killer whale sighting. Despite the low light, we were able to obtain nine IDs of an estimated dozen from this group. Along came the fog with a few scattered humpback sightings. The next big find was a large aggregation of sperm whales. We launched the small boat and obtained over a dozen IDs and ten biopsies. We found two pairs of "friendly" humpbacks, who made our photo-ID efforts difficult by following the stern of the ship. We ended the week with a multi-species sighting of humpbacks, Pacific white-sided, Risso's and northern right whale dolphins. Let's hope for less fog and calm winds next week!

Species	Weekly	Cumulative CSCAPE
Humpback whale IDs	14	54
Blue whale IDs	10	10
Fin whale IDs	2	2
Sperm whale IDs	14	14
Killer whale IDs	9	46
Northern right whale dolphins*	1	5
Pacific white-sided dolphins*	1	7
Risso's dolphins*	1	1
Dall's porpoise*	1	1

*number of groups photographed

Bird Blurb (Sophie Webb, Rich Pagen and Peter Pyle)

The bird world has not been quite as busy as anticipated which in some ways has been a good thing seeing as due to unforeseen circumstances we lost one birder, Rich Pagen. Fortunately, though, we are getting him back and are eagerly anticipating having him on the flying bridge again sometime this weekend.

The weather has not been particularly conducive to bird observation: a lot of fog. Despite the weather we still encountered some interesting birds as we made our way south to the main study area off Central California. Peter had a pair of Kittlitz's Murrelet's off of Oregon, we've had a

couple late Murphy's Petrels off shore and there are good numbers of South Polar Skuas, of which I have singularly failed to get any decent photos. Otherwise, birds have been much as expected. The dominant species have been Western Gull, Rhinoceros and Cassin's Auklets, Sooty and Pink-footed Shearwaters. Early in the week we had an afternoon with Leach's Storm-Petrels streaming by, more than I ever recall seeing off of Northern California before. And today, there's a Red-necked Phalarope migration taking place with small flocks of 16-20 passing by the ship as we sit and wait out the fog.

Oceanographic Operations (Mindy Kelley, Liz Zele, and Lacey O'Neal)

Mindy has continued to evict the computer gremlins that had spread to the oceanography computers. Operations are almost back to normal. The new Niskin bottles are working well.

Date	CTDs	Bongo tows	XBTs
07/07	1	0	2
07/08	1	1	0
07/09	2	1	4
07/10	2	1	4
07/11	1	0	3
07/12	1	1	4
07/13	2	1	4